

A NEW SPECIES OF NORTH AMERICAN CECIDOMYIIDAE
(DIPTERA) FROM *SPARTINA ALTERNIFLORA*
(POACEAE)

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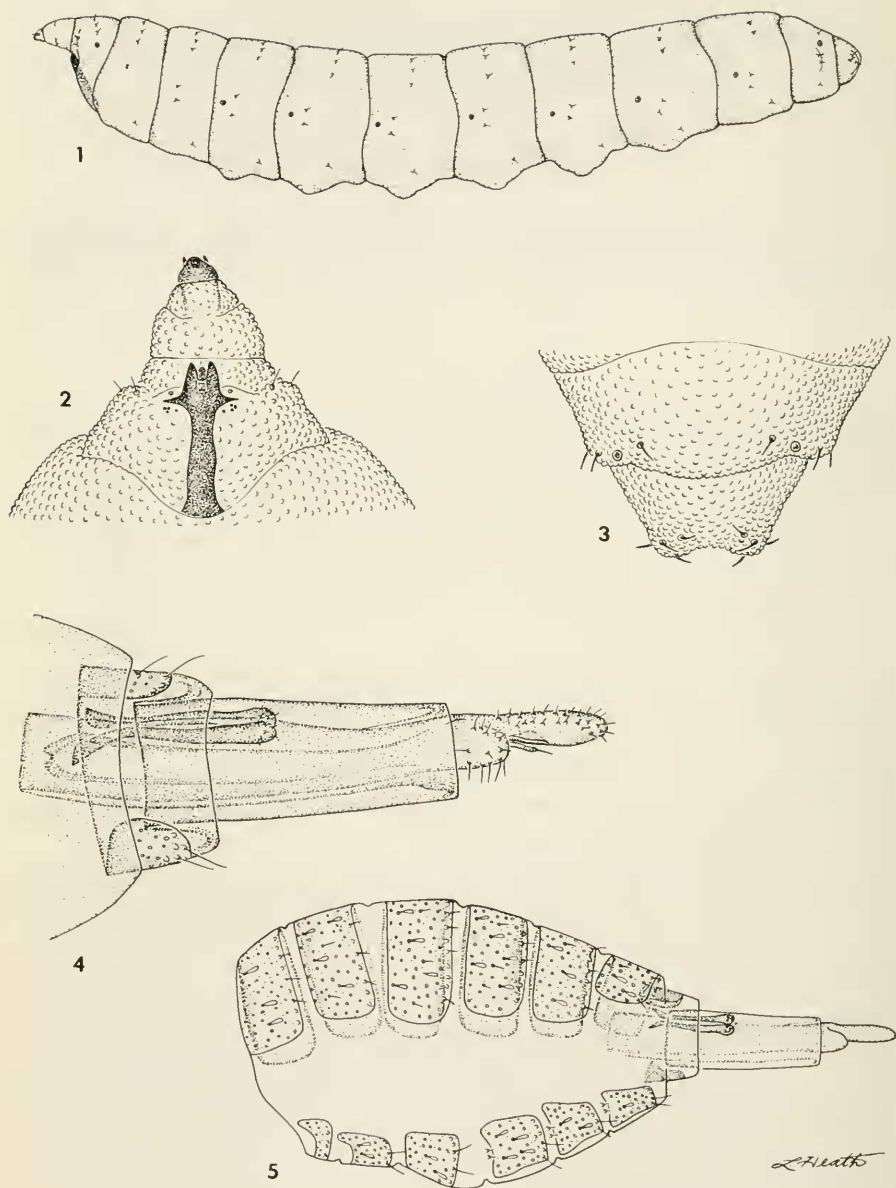
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Abstract.—A new species of cecidomyiid fly, *Calamomyia alterniflorae* Gagné, is described and illustrated. Its larvae live in the culms of smooth cordgrass, *Spartina alterniflora* Loisel., the dominant vascular plant in coastal intertidal marshes in eastern North America. The new species is compared with the other described species of *Calamomyia*, and the scant information available about that genus is reviewed.

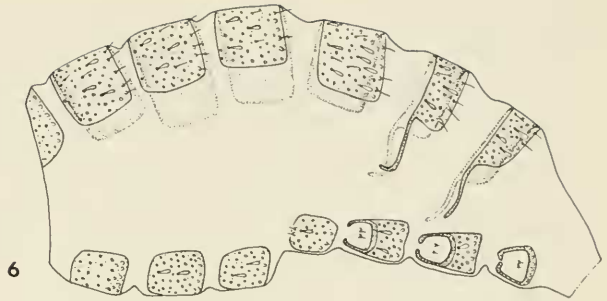
A new species of *Calamomyia* from smooth cordgrass, *Spartina alterniflora* Loisel., is described here to make a name available for a study in progress by Nolan H. Newton, a graduate student in the Department of Entomology, North Carolina State University at Raleigh. Mr. Newton is currently preparing a paper on the biology of this gall midge and other insects associated with smooth cordgrass.

Calamomyia Gagné is a genus of phytophagous cecidomyiids that until now contained 17 species (Gagné, 1969), all from North America and all described by Felt in separate papers between 1908 and 1936. Only six species were reared from hosts, one from an unidentified grass, the others from grasses in the genera *Danthonia*, *Echinochloa*, *Eragrostis*, *Panicum*, and *Phragmites*. These came from culms showing no exterior sign of damage except occasional discoloration due to an associated fungus. One other species was collected in the act of ovipositing on another species of *Panicum*. The remaining ten species of *Calamomyia*, each known from a single male or female specimen, were caught in flight but are presumably also associated with grasses.

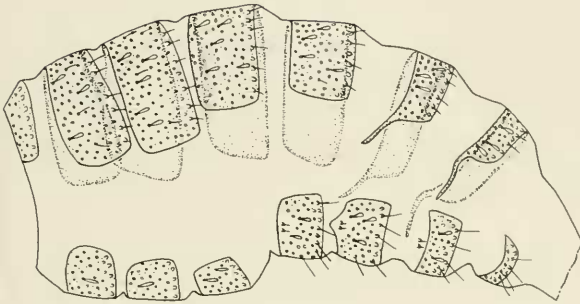
No one yet has undertaken a proper study of *Calamomyia*, but the genus is probably very rich in species. The known hosts, including the new one recorded here, are distributed among five tribes of Poaceae. The recorded, combined distribution is from the Atlantic coast to North Dakota and Mis-



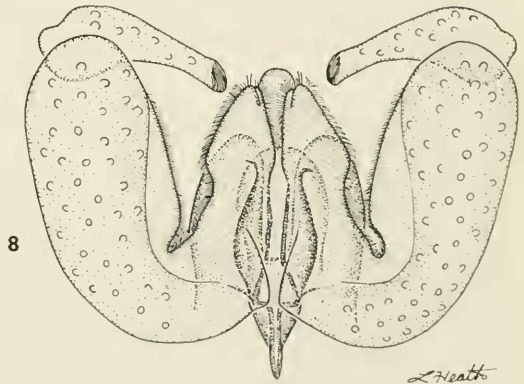
Figs. 1-5. *Calamomyia alterniflorae*. 1, Larva (lateral view). 2, Anterior segments of larva (ventral). 3, Posterior segments of larva (dorsal). 4, Female postabdomen (lateral). 5, Female abdomen (lateral).



6



7



8

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Fig. 6. *Calamomyia agrostis*, male abdominal segments 1-8 (lateral view). Figs. 7-8. *C. alterniflorae*. 7, Same as above. 8, Male terminalia (ventral).

souri, but I have seen specimens of undescribed species from California. Cecidomyiids of the genus are very common. In late summer in the Washington, D.C. area, full-grown larvae can be found readily, singly or gregariously, in the culms of almost any species of native grass. These cecidomyiids are inconspicuous enough to preclude notice except when close

attention is paid to the fauna associated with a particular grass, such as Nolan Newton is doing for smooth cordgrass.

Calamomyia alterniflorae Gagné, NEW SPECIES

Adult.—Scale color pattern: Frons white, head brown behind except white laterally; scutum mostly brown with 2 dorsocentral and 2 lateral white stripes; pleurites white; wing brown along costal margin except white at junction with R5; legs brown dorsally, lighter basally on basal tarsomeres but not distinctly banded, white ventrally; abdominal tergum 1 mostly white, with narrow, brown, central and lateral stripes; remaining terga mostly brown, terga 2–4 each with 2 large, white, triangular patches, 5–6 with few white scales apically, tergum 7 with white scales and setae along apical margin; sides and venter of abdomen white. Antenna with 13–15 flagellomeres in male, 15–16 in female. Palpus 4-segmented. Wing length, 1.4–1.5 mm in males, 1.5–1.6 mm in females; R5 (from arculus) slightly shorter than $\frac{1}{2}$ wing length. Male abdomen (Figs. 7–8): pleurites 6 and 7 with sclerotized band extending ventrally from associated terga; sterna 6–8 rectangular, not pincer shaped basally; sterna 7–8 short. Female abdomen (Figs. 4–5) with divided tergum 8.

Larva (Figs. 1–3).—Spatula tridentate anteriorly. Terminal segment with 8 setae.

Types.—Holotype δ , ex culms *Spartina alterniflora* collected 19-VIII-1976, Carteret Co., North Carolina, N. H. Newton, USNM type no. 76640. Paratypes (all in USNM): 13 δ , 7 η , with same data as holotype except 1 δ and 1 η collected 7-VII-1975; 7 larvae, same locality, 28-VII-1976, and 2 larvae, Bar Harbor, Maine, 3-VIII-1973, W. W. Woodhouse. Additional material is deposited in the Department of Entomology Collection, North Carolina State University, Raleigh.

Remarks.—*Calamomyia alterniflorae* differs from all other described males of *Calamomyia* spp. in that the anterior margins of abdominal sterna 6–8 are not pincer shaped. The difference is seen in Figs. 6 and 7, which show representative male abdomens of *C. agrostis* (Felt), generally similar to previously described *Calamomyia* spp., and of *C. alterniflorae*. The larva of *C. alterniflorae* has four pairs of setae on the terminal segment rather than the three pairs found in the two species for which larvae are known, namely, *C. echinochloa* (Felt) and *C. inustorum* (Felt).

LITERATURE CITED

- Gagné, R. J. 1969. A tribal and generic revision of the Nearctic Lasiopoteridi (Diptera: Cecidomyiidae). Ann. Entomol. Soc. Am. 62: 1348–1364.